APPLIES TO: ICOM IC-F121 / IC-F221 Mobile Radios

RADIO MODIFICATIONS:

Install ICOM Option cable OPC 617 into J6 connector as shown below: The jumper location D will require solder bead. Unplug J7 internal speaker connector.
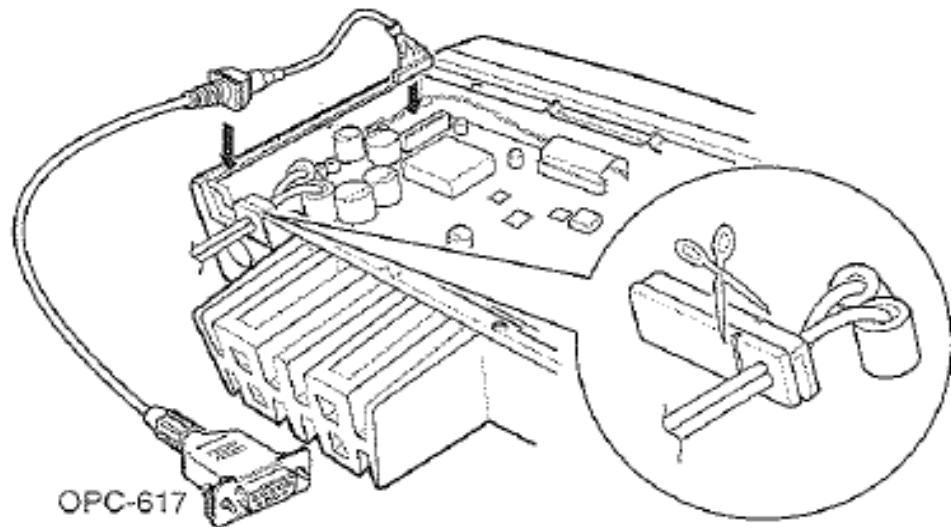
OPC-617

Cut off the bushing as in the illustration, when you install the optional OPC-617.

RADIO PROGRAMMING:

Radio programming is required using ICOM CS-F100 and Interface SOPC1122. Under **Common** / **Set Mode** / **AF Min Level** is programmed to maximum, set to **255** & **Enable**. To use Pin 6 of OPC-617 for Squelch Type COR will require 2/5 tone function be disabled. Under **Common** / **Expert** / **RX EXO** set to **ON** & **Delay Timer** set to **OFF**. To enable Pin 5 function for Ext PTT under **Common** / **Expert** / **EPTT/FTSW** set to **EPTT.**

RADIO CONTROLS:

Adjust the Volume Control until the yellow "SIGNAL" indicator on the associated DSP Module flashes with receive audio. Should be about in the full volume position.

CABLING:

Standard ACU-1000 and ACU-T Interface cables are made up of a 2 foot TRP Radio Tray Interface cable and the appropriate 13-foot Extension cable.

ACU-1000 Interface Cable	JPS P/N 5961-291302	(5961-271302 + 5961-261002-00)
ACU-T Cable	JPS P/N 5961-281302	(5961-271302 + 5961-281013-00)
TRP-1000 Shelf Interface Cable	JPS P/N 5961-271302	
RF Connector Type	PL259	

DSP JUMPERS:

JP1	High Impedance (SEE NOTES)
JP2	Balanced *

DSP PROGRAMMING:

RX Level	7	-16dBm
TX Level	6*	0dBm*
Squelch Type	COR	(SEE NOTES)
COR Polarity	Active Low*	
High Frequency Equalizer	4*	Flat*
RX Audio Delay	2*	100 ms*
TX Audio Delay (Radio Type)	0*	No Delay*
Noise Reduction Value	0*	Off*
VOX/VMR Threshold	1*	Med1*
VOX/VMR Hang Time	3*	775 ms*
COR Inhibit After PTT	1*	100 ms*
All Others	As needed	

(* Indicates Default Value)

NOTES:

The DSP Module for this Interface Cable must have the default setting of JP1 change to the High Impedance as shown above. Also required is the radios Volume in the Full Position with RX level setting of 7 (-16dBm).

For the interface to use Squelch type COR the DSP Module for this Interface Cable will require a setting of COR Active Low. It is also required that the radio programming for all radio channels to have the 2/5 tone function disabled and RX EXO set on with delay timer off. The default DSP setting for Squelch type of VOX may also be used.

PURCHASED PART

Rev	ECO	Date
A		8-24-05

USE MOLDED CABLE
(JPS P/N 5961-261003-00)

P2

P1

GND

TXB

PTT

RXA

RXB

TXA

COR

ANA GND

C2 $+$ 22µF

C1 $+$ 22µF

R3 220

1
6
2
7
3
8
4
9
5
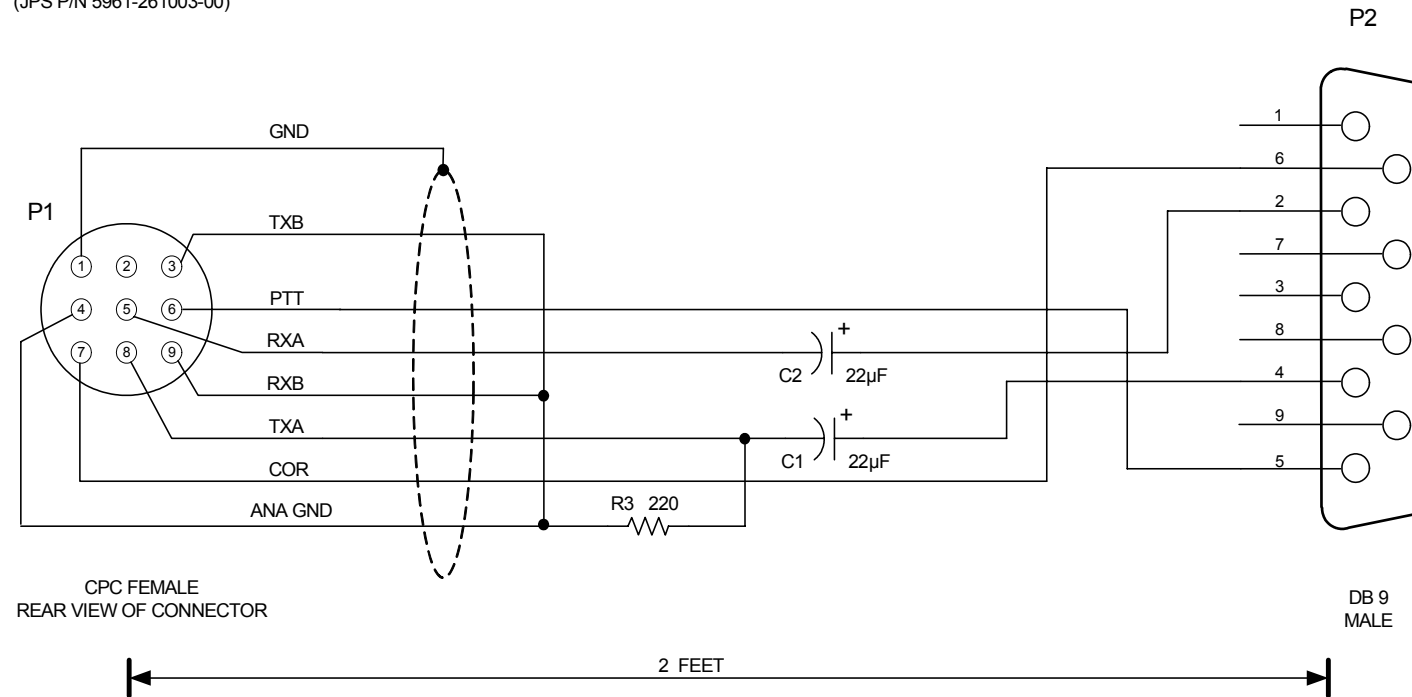
CPC FEMALE
REAR VIEW OF CONNECTOR

DB 9
MALE

2 FEET

COMPONENT PCB
(JPS P/N 5961-271000)

R3   JPS P/N 1820-221000
C1   JPS P/N 0321-220250
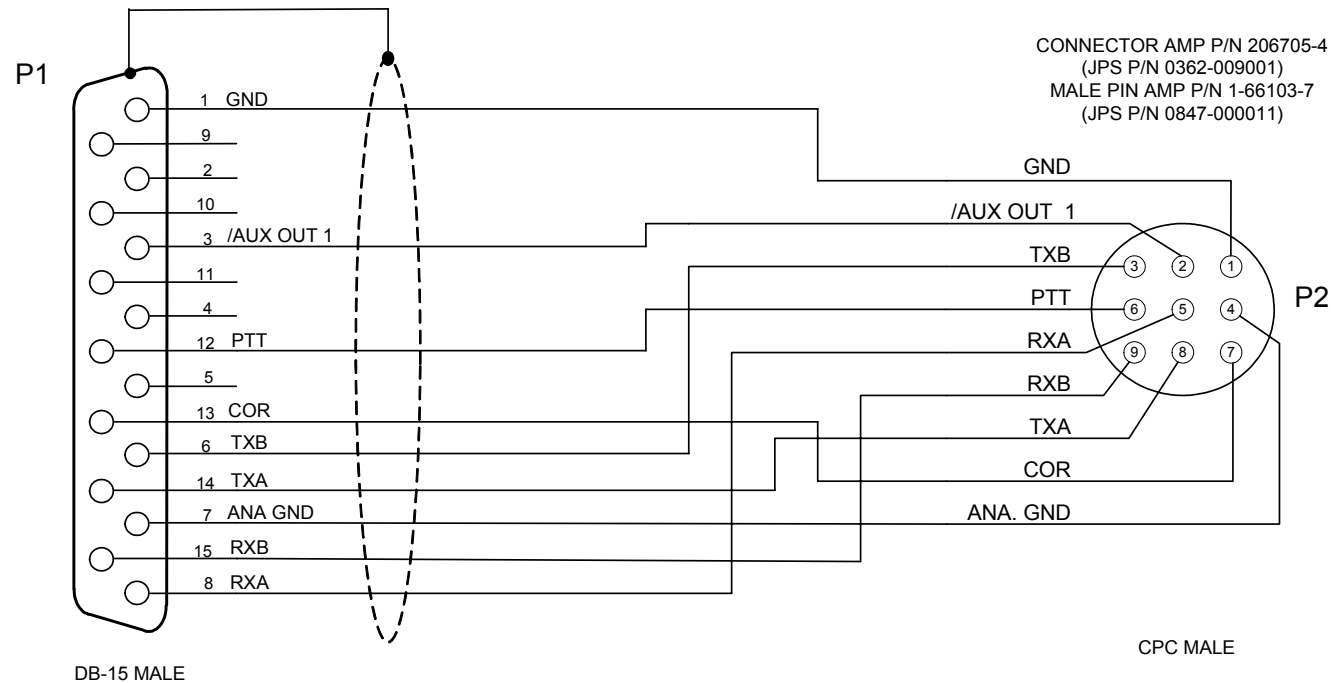C2   JPS P/N 0321-220250
JU2
JU5
JU6

NOTES: SHIELD DRAIN CONNECTED TO PIN 1 OF P1 ONLY.
RADIO MUST HAVE OPC 617 OPTION CABLE INSTALLED.
RADIO MUST HAVE SOLDER BEAD D SHORTED.
INSTALL JACK SCREWS ON P2.

USED WITH: ICOM IC-F121 / F221 MOBILE RADIOS

Designed By: RBP	**Raytheon** **JPS Communications** Raleigh, NC USA		
Drawn By: RBP	Title	CABLE, CPC TO ICOM IC-F121/221	
Checked By:	Size A	Document Number 5961-271302	Rev A
	Issued Date	AUGUST 24, 2005	Sheet 1 of 1

PURCHASED PART

Rev	ECO	Date
A		

P1

CONNECTOR AMP P/N 206705-4
(JPS P/N 0362-009001)
MALE PIN AMP P/N 1-66103-7
(JPS P/N 0847-000011)

1 GND
9
2
10
3 /AUX OUT 1
11
4
12 PTT
5
13 COR
6 TXB
14 TXA
7 ANA GND
15 RXB
8 RXA

DB-15 MALE

GND
/AUX OUT 1
TXB
PTT
RXA
RXB
TXA
COR
ANA. GND

P2

(3) (2) (1)
(6) (5) (4)
(9) (8) (7)

CPC MALE

13 FEET

NOTES:
1) USE BELDEN 9934 SHIELDED CABLE.
2) CONNECT SHIELD DRAIN TO SHELL OF P1 ONLY.
3) CONNECTORS P1 AND P2 MUST BE MOLDED TO THE CABLE.
4) CABLE MUST BE LABELED WITH THE RAYTHEON/JPS P/N AND REV, VENDOR CODE AND DATE (MM/YY).
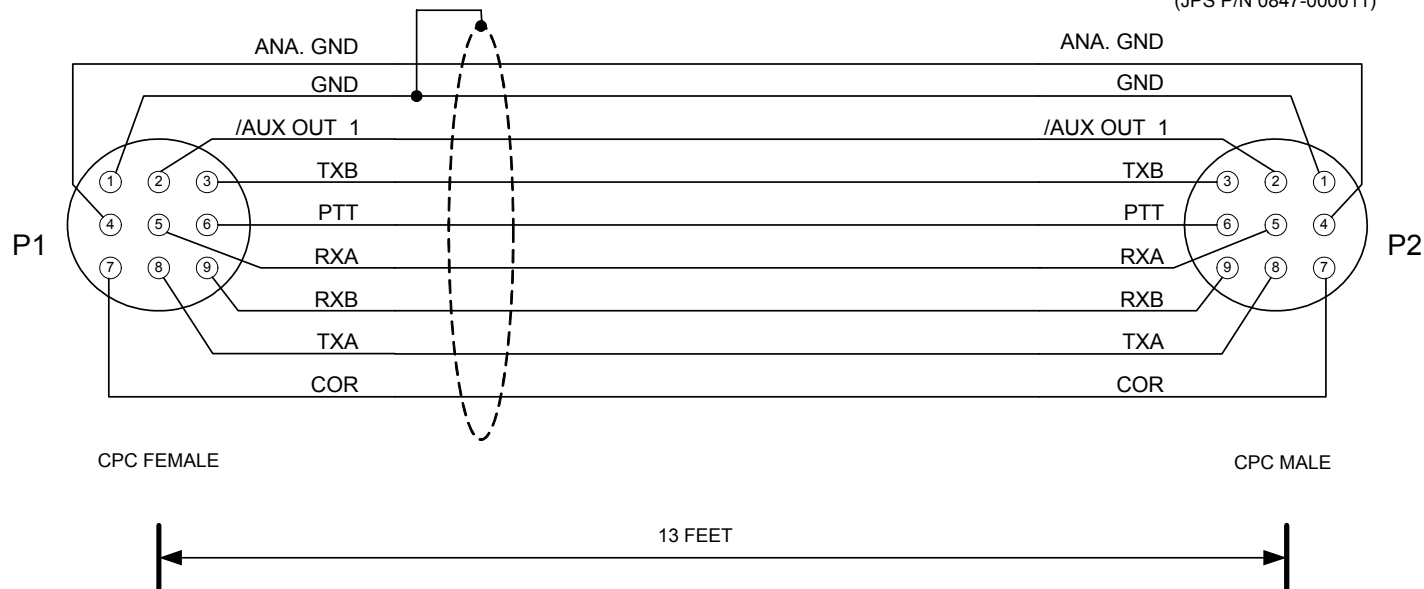
Designed By: JAC	**Raytheon** JPS Communications		
Drawn By: JAC	Title CABLE, ACU-1000 RADIO EXTENSION - 13 FT		
Checked By: RBP	Size A	Document Number **5961-261002-00**	Rev A
	Issued Date JANUARY 5, 2004		Sheet _1_ of _1_

Rev	ECO	Date
A		

PURCHASED PART

CONNECTOR AMP P/N 206708-1
(JPS P/N 0362-005003)
FEMALE PIN AMP P/N 1-66105-8
(JPS P/N 0362-005002)

CONNECTOR AMP P/N 206705-4
(JPS P/N 0362-009001)
MALE PIN AMP P/N 1-66103-7
(JPS P/N 0847-000011)

ANA. GND		ANA. GND
GND		GND
/AUX OUT 1		/AUX OUT 1
TXB		TXB
PTT		PTT
RXA		RXA
RXB		RXB
TXA		TXA
COR		COR

P1

P2

CPC FEMALE

CPC MALE

13 FEET

NOTES:
1) USE BELDEN 9934 SHIELDED CABLE.
2) CONNECT SHIELD DRAIN TO PIN 1 OF P1 ONLY.
3) CONNECTORS P1 AND P2 MUST BE MOLDED TO THE CABLE.
4) CABLE MUST BE LABELED WITH THE RAYTHEON/JPS P/N AND REV, VENDOR CODE AND DATE (MM/YY).

Designed By: JAC	**Raytheon JPS Communications** Raleigh, NC USA		
Drawn By: JAC	Title	CABLE, ACU-T RADIO EXTENSION - 13 FT	
Checked By: RBP	Size A	Document Number **5961-281013-00**	Rev A
	Issued Date	JANUARY 5, 2004	Sheet _1_ of _1_